AMENDMENTS TO THE CLAIMS

Please cancel claims 3-5, 11 and 17-19 without prejudice, and amend claims 1, 6-8, 10, 12 and 16 as follows:

1. (Currently Amended) A ring configuration method in a mesh network consisting of a plurality of nodes, each of said nodes having a cross-connecting function, wherein a ring network (herein after called a ring) comprising a working path and a stand-by path is configured dynamically in response to a request for setting said working path,

wherein:

said mesh network is a WDM (Wavelength Division Multiplex)-based optical fiber communication network,

if a new ring to be configured is identical to an existing ring using the same wavelength as that of said new ring, the same node numbers as node numbers locally assigned to nodes in said existing ring are assigned to the corresponding nodes to each node of said existing ring in said new ring, and

if said new ring crosses or is adjacent to said existing ring using in the same wavelength, local node numbers different from those of the nodes in said existing ring are assigned to the nodes in said new ring.

2. (Original) The ring configuration method according to claim 1, wherein a ring map containing at least information about the link of said ring, information about input/output ports at each of nodes along channels constituting said ring, and local node

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numbers (addresses) locally assigned to the nodes in said ring is provided to the nodes constituting said ring.

Claims 3-5. (Cancelled).

6. (Currently Amended) The ring configuration method according to claim [[3]] 1, wherein if a new ring to be configured is identical to or crosses an existing ring using the same wavelength of the new ring, a section of a stand-by path that is common to both of the rings is shared between the rings.

7. (Currently Amended) The ring configuration method according to claim 1, wherein a network management system centrally performs network map generation, path calculation, path setting, generation of said a ring map, and the provision of said ring map to each node, by collecting information about connections between nodes and available channels.

8. (Currently Amended) The ring configuration method according to claim 1, wherein each node uses a routing protocol and signaling protocol to perform in a distributed manner network map generation, path calculation, path setting, and generation of said a ring map, by collecting information about connections between nodes and available channels.

9. (Original) A failure recovery method in a mesh network using the ring configuration method according to claim 1, wherein, if a failure occurs in said working path, nodes perform signaling for failure recovery to cause traffic to switch to said stand-by path to recover the network from the failure.

10. (Currently Amended) A node address assignment method that dynamically configures a new ring network including a working path and a standby path in response to a request for setting the working path in a mesh network consisting of a plurality of nodes, each of said nodes having a cross-connecting function, wherein: if the new ring to be configured is identical to an existing ring, the same node numbers (addresses) as those assigned locally to nodes in said existing ring are assigned to the corresponding nodes to said existing ring in said new ring, and wherein, if said new ring crosses or is adjacent to said existing ring, local node numbers different from those of the nodes in said existing ring are assigned to the nodes in said new ring.

11. (Cancelled).

12. (Currently Amended) A node address assignment method that dynamically configures a new ring network (ring) including a working path and a standby path in response to a request for setting the working path in a mesh network consisting of a plurality of nodes, each of said nodes having a cross-connecting function, wherein if the new ring to be configured crosses or is adjacent to said existing ring, local node numbers different from those of the nodes in an existing ring are assigned to the nodes in the new ring, and wherein if the new ring to be configured is identical to an existing ring, the same node numbers (addresses)

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as those assigned locally to nodes in said existing ring are assigned to the corresponding nodes
to said existing ring in said new ring.

13. (Cancelled).

14. (Original) The node address assignment method according to claim 10,
wherein said mesh network is a WDM (Wavelength Division Multiplex)-based optical fiber
communication network.

15. (Cancelled).

16. (Currently Amended) A node device in a mesh network configured in such a
way that a ring network (ring) consisting of a working path and a stand-by path is dynamically
configured in response to a request for setting said working path, said node device comprising
a ring map including at least information about the link of said ring, information about
input/output port at each node of channels constituting said ring, and a local node number
(address) assigned locally to each node constituting said ring, wherein said mesh network is a
WDM (Wavelength Division Multiplex)-based optical fiber communication network, and
wherein, if a new ring is identical to an existing ring using the same wavelength, in said ring
map, the same node numbers as node numbers locally assigned to nodes in said existing ring
are assigned to the corresponding nodes to said existing ring in said new ring, and wherein, if
a new ring crosses or is adjacent to said existing ring using the same wavelength, in said ring

map, local node numbers different from those of the nodes in said existing ring are assigned to the nodes in said new ring.

Claims 17-19. (Cancelled).

20. (Original) The node device according to claim 16, wherein a management system managing the network centrally manages and provides said ring map to each node device.

21. (Original) The node device according to claim 16, wherein each node uses a routing protocol and signaling protocol to perform in a distributed manner generation of the network map, path calculation, path setting, and generation of said ring map by collecting information about connections between nodes and available channels.